

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/727,511	ARNOLD ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	David H Kruse	1638	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Amendment filed 13 February 2004.
2. ☒ The allowed claim(s) is/are 1-5,7-9,11,19 and 33-53.
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☒ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> <li>1. <input type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br/>Paper No./Mail Date _____</li> <li>4. <input checked="" type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br/>of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</li> <li>6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date <u>SAME</u>.</li> <li>7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input type="checkbox"/> Other _____</li> </ol> |
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### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Robert Hanson on 23 April 2004.

The application has been amended as follows:

At claims 2 and 5, "parts" has been amended to read -- a part --.

At claim 7, -- produced -- has been inserted after "cells".

At claim 8, line 1, "or protoplasts" has been deleted, and at line 2, "isolated" has been replaced with -- produced --.

At claim 9, line 2, "expresses" has been replaced with -- has --.

CLAIM 10 HAS BEEN DELETED.

Claim 34 (AMENDED) A method of introducing a desired male sterility single gene trait into corn inbred line LH246 comprising:

(a) crossing a LH246 plant[s] [grown from LH246 seed], representative seed of which has been deposited under ATCC Accession No.\_\_\_\_\_, with a plant[s] of another corn line that comprises a desired male sterility single gene trait to produce F1 progeny plants;

(b) selecting F1 progeny plants that have the desired male sterility single gene trait to produce selected F1 progeny plants;

(c) crossing the selected progeny plants with [the] a LH246 plant to produce backcross progeny plants;

(d) selecting for backcross progeny plants that have the desired male sterility single gene trait and physiological and morphological characteristics of corn inbred line LH246 listed in the Variety Description Information to produce selected backcross progeny plants; and

(e) repeating steps (c) and (d) [three] one or more times in succession to produce [fourth] second or higher backcross progeny plants that comprise the desired male sterility single gene trait and all of the physiological and morphological characteristics of corn inbred line LH246 listed in the Variety Description Information [information as determined at the 5% significance level] when grown in the same environmental conditions.

Claim 35 (AMENDED) A corn plant produced by the method of claim 34, wherein the plant has the desired male sterility single gene trait and all the physiological and morphological characteristics of corn inbred line LH246 listed in the Variety Description Information [as determined at the 5% significance level] when grown in the same environmental conditions.

At claim 38, line 2 “:” has been deleted after “of”.

Claim 45 (AMENDED) A method of producing a corn plant with modified fatty acid metabolism or modified carbohydrate metabolism comprising transforming the corn plant of claim 2 with a transgene encoding a protein selected from the group consisting of [steryl-ACP desaturase,] fructosyltransferase, levansucrase, alpha-amylase,

Art Unit: 1638

invertase and a starch branching enzyme or a transgene encoding an antisense of a steryl-ACP desaturase gene.

Claim 46. (AMENDED) A corn plant produced by the method of claim 45, wherein said corn plant has modified fatty acid metabolism or modified carbohydrate metabolism.

Claim 48 (AMENDED) A method of introducing a desired single gene trait into corn inbred line LH246 comprising:

(a) crossing a LH246 corn plant[s] [grown from LH246 seed], representative seed of which has been deposited under ATCC Accession No. \_\_\_\_\_, with a plant[s] of another corn line that comprise a desired single gene trait to produce F1 progeny plants, wherein the desired single gene trait is selected from the group consisting of [male sterility,] herbicide resistance, insect resistance, disease resistance and waxy starch;

(b) selecting F1 progeny plants that have the desired single gene trait to produce selected F1 progeny plants;

(c) crossing the selected progeny plants with [the] a LH246 plant[s] to produce backcross progeny plants;

(d) selecting for backcross progeny plants that have the desire single gene trait and the physiological and morphological characteristics of corn inbred line LH246 listed in the Variety Description [information] Information to produce selected backcross progeny plants; and

Art Unit: 1638

(e) repeating steps (c) and (d) [three] one or more times in succession to produce selected [fourth] second or higher backcross progeny plants that comprise the desire single gene trait and all of the physiological and morphological characteristics of corn inbred line LH246 listed in the Variety Description [information] Information [as determined at the 5% significance level] when grown in the same environmental conditions.

Claim 49 (AMENDED) A corn plant produced by the method of claim 48, wherein the plant has the desired single gene trait and all of the physiological and morphological characteristics of corn inbred line LH246 listed in the Variety Description [information] Information [as determined at the 5% significance level] when grown in the same environmental conditions.

At claims 50-52, line 1, "The plant" has been amended to read -- The corn plant -

At claim 51, line 2, ":" has been deleted after "of".

Claim 53 (NEW) A protoplast produced from the tissue culture of claim 7.

Applicant's attorney approved the entry of the amendments to the claims, see attached Interview Summary.

**REQUIREMENT OF ALLOWANCE UNDER 37 CFR §§ 1.801-1.809**

2. The Deposit Statement in the response filed 17 September 2002, page 12, is deemed in accordance with 37 CFR §§ 1.801-1.809. Since the application is otherwise in condition for allowance except for the needed deposit of seed, and since the Office has received written assurance that an acceptable deposit will be made on or before payment of the issue fee, the Office is authorized to mail Applicant a Notice of Allowance and Issue Fee Due together with a requirement that the needed deposit be made within THREE (3) MONTHS of the mail date of this letter (see 37 CFR § 1.809(c)).


As set forth in 37 CFR § 1.809(c), Applicant is required to deposit 2500 seeds of the claimed plant within THREE (3) MONTHS of the mail date of this letter; thus the time for making the deposit is on or before the payment of the issue fee.

Applicant is reminded that once the deposit of seed has been made, information regarding the date of deposit, description of the deposited material including number of seeds deposited, name and address of the depository, and the accession number must be added to the specification in order to comply with 37 CFR § 1.809(d). In addition, the claims must be amended to replace the blank "\_\_\_\_\_" with the appropriate Accession Number. Amendments to the specification and the claims must be filed under 37 CFR § 1.312.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David H. Kruse, Ph.D. whose telephone number is (571) 272-0799. The examiner can normally be reached on Monday to Friday from 8:00 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Amy Nelson can be reached at (571) 272-0804. The fax telephone number for this Group is (703) 872-9306 Before Final or (703) 872-9307 After Final.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group Receptionist whose telephone number is (571) 272-0547.



David H. Kruse  
AV 1638

David H. Kruse, Ph.D.  
29 April 2004